

Business Strategies in Polish regional aviation in the last century

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The world aviation started in the year 1783, when, for the first time in history, a balloon of French brothers Montgolfier, filled with hot air, performed its first flight. However, balloon flights, due to their maneuvering limitations, have not initiated any significant development in passenger aviation. In 1903, more than 100 years later, the Wright brothers (Americans), made the first controlled airplane flight, powered by an internal combustion engine. In connection with a significant interest in the military potential of air transport, the development of aviation accelerated during World War I. In the late 1920s, Englishman Frank Whittle designed a jet engine, which ten years later was installed for the first time in a German airplane, Heinkel He 178.

Earlier, in February 1919, the world's first airline, Deutsche Luft-Reederei, launched the Berlin-Weimar line. In the same year, in March, Lignes Aériennes Farman airlines launched the first international line connecting Paris with Brussels. First of the above mentioned line has been later rebranded into German Lufthansa, and the other one into French Air France.

First airline in Polish lands, Aero-Targ, was established in 1924 for the Poznań Fair. It operated for a week between Poznań, Warsaw, and Gdańsk, from May 28 until June 5, 1924, over this time transporting about 400 passengers on 58 flights in six Junkers F 13 planes. However, the project turned out to be unfeasible. What is interesting, the cost of a ticket for a two-hour flight from Poznań to Gdańsk equaled around 6000 Polish marks, that is less than a railway ticket for the same route, which was 7884 Polish marks, (Litwiński 2008).

Before that, Warsaw-Paris passenger flights were offered by French-Romanian aviation society, CFRNA (Compagnie Franco-Roumaine de Navigations Aérienne). Irregular flights were offered from September 20, 1920, and regular flights started on April 12, 1921, and continued until 1938, initially using three-seat Potez VII planes, and five-seat Potez IX planes, and, from 1924, five-seat Berline-Spad airplanes (Litwiński 2008).

First regular flights were offered in Poland by a Polish carrier in September 1922 onboard the planes of Polska Spółka Lotnicza Aerolloyd (with German capital), on the routes from Warsaw to Gdańsk and Lviv (and later to Kraków and Vienna). It is important to mention that these connections were subsidized by the Polish government. During the 6 years of their operations, these airlines performed 12,200 flights, and transported 27,500 passengers, mail, and goods. In 1924, as a result of ownership changes and the company's takeover by Polish capital investors, it changed its name to Polska Linia Lotnicza Aerolot. New carriers emerged in regions, but only Aero from Wielkopolska was serving regular passenger Warsaw-Poznań traffic. At the end of 1928, Aero merged with Aeroflot, and with Śląskie Towarzystwo Lotnicze, as a result of this, the LOT Polish Air Lines government-run company was created. The company enjoyed high subsidies for the State Treasury, since its revenue wouldn't cover even 1/3 of their operational cost in the inter-war period. With this support, the carrier quickly developed their fleet and the number of domestic and international connections served (including among others to Lydda in Palestine). In 1939, LOT Polish Air Lines (hereinafter "PPL LOT") employed almost 700 employees, including 25 pilots and 37 navigators and on-board mechanics. The carrier's fleet included 18 passenger aircrafts and 8 auxiliary aircrafts (Litwiński 2008).

During World War II, passenger aviation was not functioning in Poland. After the war, the authorities reactivated LOT as a state-owned company, which, until the end of the 1980s, was the only aviation company in Poland.¹ At that time, the aviation transport in Poland was centralized, since almost 80% of air transport was operating from the Okęcie Airport (since 2001 Fryderyk Chopin Airport) in Warsaw. Regional airports played an auxiliary role, offering flights from and to Warsaw. International connections from those airports to European cities were offered only occasionally i.e. to Munich, London, and Frankfurt (Łaguna et al., 2016).

The system changed at the end of the 20th century. Poland's accession to the European Union in 2004 has revolutionized the air market in our country. In the 1990s, a few new carriers appeared: Turavia, White Eagle Aviation, Polnippon Cargo, Polonia Airways, EuroLOT, and Exin. In the next decade, Silesian Air, Prima Charter, GetJet, Centralwings, Direct Fly, Air Poland, and Air Polonia, and several other entities in subsequent years. Most

¹ See Resolution of the Council of Ministers of 8 August 1946 on Approving the Articles of Association of the LOT Polish Air Lines State-Owned Company, and the Regulation of the Minister of Transport of 30 September 1949 on Establishing LOT Polish Air Lines State-Owned Company.

of them have ended their operations, but some still provide regular passenger aviation services: PLL LOT, Enter Air, and charter services: PLL LOT, Enter Air, Exin, Sky Taxi, Small Planet Airlines, SprintAir, and Travel Service Polska. Additionally, a few dozen other carriers from all around the world operate on the Polish sky (also on domestic lines, representing all three basic business models in aviation).² Simultaneously, the number of passengers served by Polish airports was growing rapidly. The number of passengers grew from 8,834,912 people cleared in 2004 to 15,362,286 people in 2006., marking a 74% increase. At the same time, the number of passenger operations rose from 179,321 in 2004 to 236,746 in 2006, accounting for an increase of 32%. The difference between the higher number of passengers and the number of operations is related to the larger size of aircrafts handled by Polish airports. The average number of passengers per operation increased from 49 in 2004 to 65 in 2006 (ULC 2008).

In 2017, ULC statistics showed continuous development of the passenger aviation sector in Poland, which had better results than the European and world markets. For instance, during the first three quarters of 2017, Polish airports served over 30 million passengers, which marked an increase of 19% as compared to the same period in 2016. Good results were based on a bigger offer of airlines, and on the growing high load factor, at 88% in the aforementioned period. The average number of passengers per flight was 119 at the time, being almost twice the number from 2006 (ULC 2018).

According to the information above, after World War II, the regional air traffic in Poland was operated by PPL LOT, and connected the capital with the largest cities in Poland. Most of those connections have operated to this day, although several lines were closed, due to insufficient infrastructure, changed aircraft (larger, with higher requirements), or finally due to low demand. Presently not served, though interesting destinations, within the scope of regional passenger traffic, include:

- Białystok (Krywlany airport), where, shortly after the end of the war, PPL LOT was flying from Warsaw (Wiśniewski 2009).

- Częstochowa (Rudniki), PPL LOT was operating from this airport only in 1983, offering flights to the capital (Blue Ocean Business Consulting 2013).

² In 2018, in the summer time, the Ryanair airline operated, among others, on the domestic routes between Kraków-Gdańsk and Warsaw-Szczecin.

- Łódź (Lublinek), despite a relatively short distance from Warsaw, before 1958, this airport was operating connections with the Okęcie Airport as well as with Gdańsk, Katowice, Kraków, and Wrocław. Regular connections with Warsaw returned to the airport no sooner than in the late 1990s, but due to low demand and for technical reasons, they were quickly suspended. There was an attempt to reactivate this line at the end of 2005, with the use of 18 seat Jetstream J32 aircraft of the Jet Air line, ordered by PPL LOT.³⁴

- Katowice (Muchowiec), unlike the Katowice-Pyrzowice Airport located at a distance of approx. 30 km, this airport is located within the city, 4 km from the strict downtown. In the 1950s, it was still handling regular connections with Warsaw.⁵

- Koszalin (Zegrze Pomorskie), between 1965-1991, was handling regular passenger traffic to Warsaw, Kraków, Katowice, Wrocław, and Rzeszów. In the record year 1979 the airport served 80 000 passengers (the City Office in Koszalin 2013).

- Olsztyn (Dajtki), this airport is located 5 km from Olsztyn's downtown, unlike the nearest Olsztyn-Mazury Airport, which is more than 50 away. Shortly after the war, PLL LOT was using small planes with few seats to serve regular connections with Warsaw and Bydgoszcz (Łukaszewicz 2006).

- Słupsk (Redzikowo), between 1975-1990, the airport was handling a regular connection with Warsaw using 50-seat An-24s, and for a short time, also with Wrocław, and Katowice. In 1996 there was an attempt to reactivate the connections with Warsaw, but only one flight was made with 18-seat L-410 Turbolet of the Polish White Eagle line; due to a low interest, the connection was closed.⁶

In the 1990s, domestic flights between the largest cities were offered by PLL LOT, and, since 1997, by Eurolot, the aim of which was to reactivate regional aviation in Poland. Initially, Eurolot offered connections with ATR 42-300 planes, and with eight ATR 72-200 machines, and later also with two 18 seat British Aerospace Jetstream 31 planes. In 2009, the company purchased three Embraer 175 planes, and in 2011 it started their own operations under their own brand (previously it was operating PLL LOT's domestic connections). In

³ The lack of suitable airport infrastructure, which would make it possible to operate at unfavorable weather (i.e. ILS).

⁴ See. <http://lotnisko.lodz.pl/pl/historia.html> [access 07.10.2018]

⁵ See. https://mojekatowice.pl/p,s,historia_dzielnicy_muchowiec.html [access 04.10.2018]

⁶ See. http://www.polot.net/lotnisko_w_slupsku_redzikowie_2010r_ [access 07.10.2018] and Gazeta Wyborcza 08.06.1996

2012 the carrier made a strategic decision to replace the fleet with eight new Bombardier Q400 planes. The new airplanes have significantly higher capacity and the carrier opened additional ten to twenty international routes. After this time, the company experienced worse financial performance and suspended the operations in 2015. The regional flights are taken over again by PLL LOT (using, among others, Bombardier Q400 planes from Eurolot). According to one of the presidents of Eurolot, the direct cause of its bankruptcy was the strategic decision to buy new Bombardiers, which were "too good" to operate regional connections. It means that these airplanes, because of their specific nature, are more suitable for international, medium-distance flights, and are not adapted to regional flights. In this context, these airplanes were relatively expensive and offered significantly better performance (including the number of seats and the range) than justified by regional aviation demand at the time.⁷⁸

In 2012, OLT Express airplanes appeared on the Polish sky for four months (from April to July). The connections were operated by ATR 42 airplanes (46 seats), ATR 72 (68 seats), Airbus A319 (156 seats), and A320 (180 seats)⁹. During its operations, the carrier's connections network was changing, but the following scheme can be considered typical:

⁷ Both in the context of buying airplanes, and of the cost of their maintenance.

⁸ Unauthorized statement of president L. Sieluk in September 2014.

⁹ Two carriers were operating formally under the OLT Express brand: OLT Express Regional (with ATR airplanes) and OLT Express Poland (Airbuses). The lines ended the operations in connection with the bankruptcy of the owner of both enterprises, the Amber Gold company. The direct cause for ceasing their air operations were suspicious payment transfers for purchased tickets by Wirecard, a German financial agent, which, in connection with the difficulties of the carriers' owner, and with the related higher risk of serving the airlines, raised (according to the Contract binding the parties) the deposit from PLN 1 million to PLN 25 million in July 2012. The carriers had no funds to pay the deposit, which, as a consequence, led to blocking the funds from the tickets on Wirecard accounts and, after few days, to the end of OLT Express' operations – see. <https://finanse.wp.pl/kliencie-olt-express-walcz-o-swoje-6114735161157761a> [access 07.10.2018]

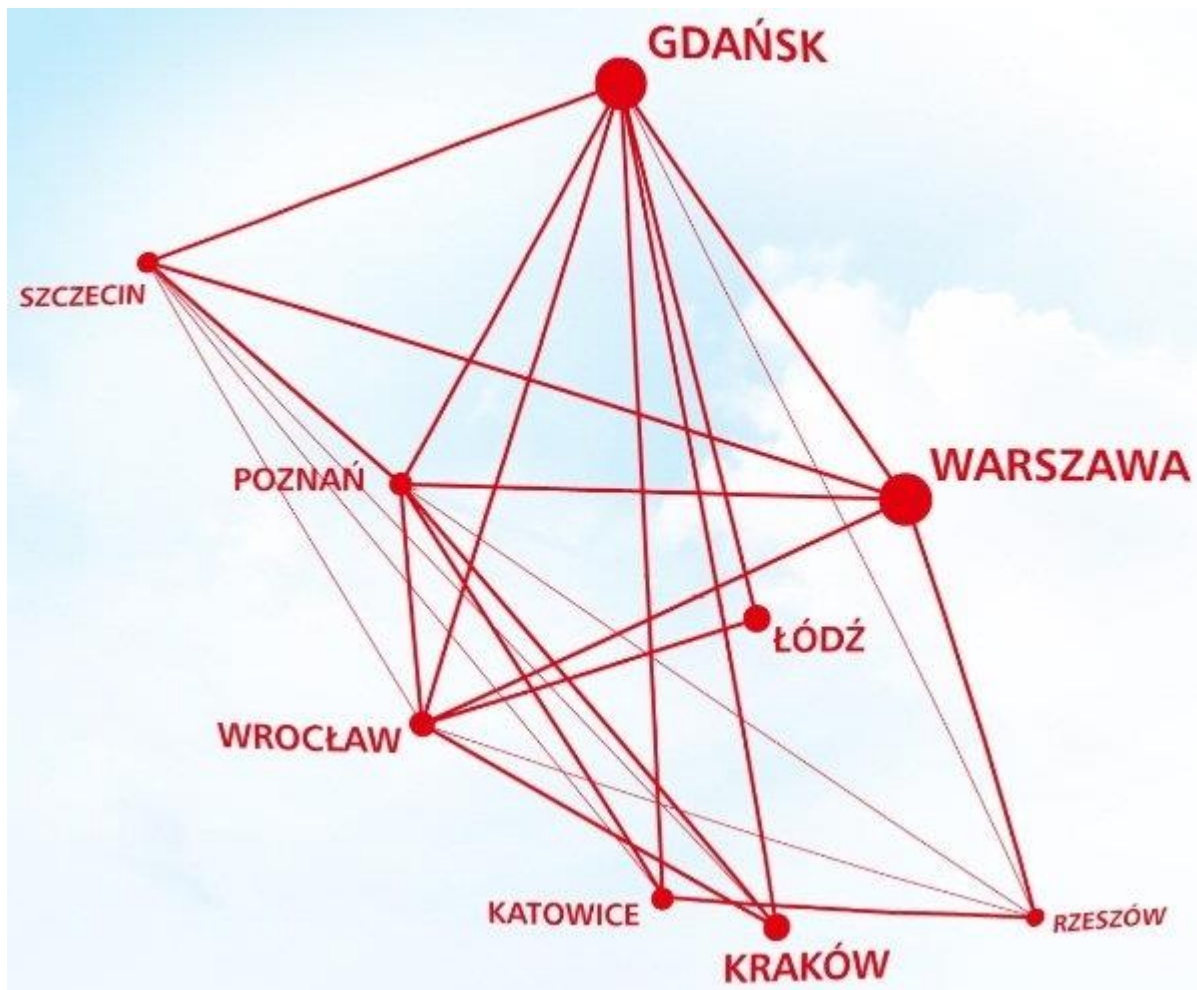


Fig. no. 1. OLT Express domestic connections network in the first half of 2012, source oltexpress.com based on Oleander 2012.

The scheme above shows several surprising routes, e.g. Szczecin-Poznań (approx. 180 km), or Poznań-Wrocław (approx. 150 km), which were partially handled by large Airbus A330s. Undoubtedly, passengers were interested in flights on these routes, among others, because of the low price of the tickets starting from PLN 99, as a consequence, in the short term of their regional operations the company carried about 320 000 passengers (Wawrzyński 2012), and the aircrafts were loaded at more than 70% (the carrier's data for May 2012, based on Oleander 2012). In total, in the second quarter of 2012, OLT Express¹⁰ carried 600 000 passengers, having more than 10% share in the Polish aviation market, according to reliable data from ULC¹¹.

¹⁰ Both carriers flying under this brand on domestic and international routes (charter).

¹¹ See

http://www.ulc.gov.pl/_download/statystyki/wg_przewo%C5%BAnik%C3%B3w_regularny_2Q_2012.pdf [access 07.10.2018]

It was only in 2014 when competitors for PLL LOT re-appeared on the domestic routes, when Ryanair opened connections from the Modlin Airport to Gdańsk and Wrocław. Due to a large distance from Warsaw's downtown (40 km), and the fact that this airport is overloaded, Ryanair moved their operations from this airport to the Chopin Airport located in Warsaw in 2016. From March 2017, Ryanair included another route into its connection network, from Warsaw to Szczecin. But in October 2017, Ryanair cancelled the connections from Warsaw to Wrocław and to Gdańsk, leaving only flights to Szczecin at the Chopin Airport. The official reason of the resignation from those connections was a conflict with the Chopin Airport Operator, which allegedly resulted in assigning unfavorable parking positions at the Airport to Ryanair. In extreme cases, it resulted in more than ten minutes' bus travel through the airport to the aircraft. Considering the fact that a flight lasts about 40 minutes, this caused a substantial and unjustified, in the carrier's opinion, extension of the travel time. Simultaneously, the carrier achieved a high load factor on these connections (despite using large airplanes designed for 189 passengers), among others by offering low prices for the tickets, starting from PLN 9. Still, taking account of the passenger service costs at the Chopin Airport, Ryanair could obtain access to the jet bridge for passengers to walk directly from the terminal to the airplane by only slightly increasing their costs. Even with the carrier's strategy (based on cost leadership), and their business model (generating the main revenue other than from the tickets sales), in reality, the resignation from those connections in fact resulted from unsatisfactory financial results on these short routes. The time of those connections significantly limits the possibility of earning profits from on-board sales, lotteries offered to passengers, or other additional services. The specification of the destination ports (Wrocław, Gdańsk), and their results in operations, excluded any benefits under the marketing fees paid by local governments. In this context, the decision to resign from these two connections was rational. Simultaneously, the carrier still operates the longest regional connection from the Warsaw Airport to Szczecin. This confirms a higher profitability of longer connections, in the context of the equipment used and the business model adopted. Apart from this route from the Chopin Airport, in 2017 Ryanair also established two connections not involving Warsaw on the routes: from Gdańsk to Wrocław, and Kraków (Piotrowski 2017, Piotrowski 2017).

Ryanair's domestic connections have a high load factor, more than 80% , but in Poland, also PLL LOT airplanes fly highly loaded. The appearance of the low-cost carriers and OLT Express on the Polish sky contributed to a significant drop in ticket prices, and a reduction in

the quality of services¹². With the carriers' low prices and marketing campaigns, their services are used by a growing number of passengers, who, for the first time in their life, fly onboard an aircraft (Piotrowski 2017). This illustrates the growing demand for domestic connections, assuming that the ticket price will not be significantly different from the price of alternative means of transport. The regional aviation in Poland is now a highly saturated market. In 2018, only Ryanair and PLL LOT offered domestic connections on the Polish sky, but only one line (Warsaw-Szczecin) was handled by both carriers. Therefore, the regional aviation competes against railway and bus transport, and private means of transport (Tłoczyński 2016). At the same time, it should be noted that, on distances of approx. 300 km, the whole travel is not significantly faster than the alternative means of transport (need to get to an airport early enough before the flight due to, among others, security procedures and need to serve large passenger groups, the boarding time, taxing the airplane around the airport, the flight itself, the handling time at the destination airport, and then the time to get to the city center). For instance, on the Warsaw-Wroclaw line, trains arrive in about 3.5 h¹³ (in 2018), and a flight takes about 40 minutes. But, after adding the time required for the air trip, the total travel time is similar to the railway travel.

Despite the above mentioned conditions, Polish airports record a high increase in domestic traffic. The Chopin Airport recorded more than 66% increase in the number of passengers served in domestic traffic in 2017 (compared to the year 2016), with simultaneous growth in operations by 25.6%. This illustrates Ryanair's appearance on the domestic routes this year, with their large airplanes (Boeing 737, with 189 seats), they offer tickets as cheap as PLN 9 on the domestic routes, causing a high aircraft load factor (ULC 2017, Piotrowski 2017). Although the load factor is high on these routes, they are characterized by a low margin, therefore, without any further incentives¹⁴, the carriers don't want to open new connections in fear that they won't be able to fill up large airplanes, in which the approximate cost of a single passenger seat on a domestic route amounts to PLN 100. Therefore, the growing demand for domestic aviation connections still does not result in a sufficient growth in supply (Piotrowski 2017). The conditions above result from the strategy of the carriers operating in Poland, including their chosen fleet. Ryanair operates large Boeings 737, which is compatible with

¹² Air lines resign from free meals, carrying additional luggage, etc..

¹³ It should be noted, however, that in 2018 the average time of a railway route is much longer than in the fast train example.

¹⁴ In the form of the so-called marketing subsidies (namely marketing services bought by local authorities to the carriers), or a reduction in airport fees.

their low cost strategy with the scale effect¹⁵, but increases the risk of failure to achieve a suitable airplane load factor for routes at shorter distances, keeping a viable average ticket price for the given flight. PLL LOT operates flights on domestic routes with smaller Bombardiers Q400, which can take up to 78 passengers.¹⁶ In this context the limitations of carriers operating in Poland at the moment should be emphasized, as their fleet is suitable for flights on longer routes, and regional routes increase their operational risk.

The regional passenger aviation has been developing in Poland for almost one hundred years. Over this time, the continuous development of this aviation sector is visible, although World War II and the time of PRL have significantly slowed down the development of this aviation sector. It is worth noting that in almost all of the above mentioned times, regional connections have received financial support, in the form of direct subsidies, or a preferential payment system, or even marketing services. This indicates the strategic significance of this type of flights, continued even when they are not financially feasible. In the context of market forecasts (regarding further development of Polish regional aviation), for the time being, there is no reason to expect changes in this regard.

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¹⁵ Obtained, among others, by making the fleet uniform, which is reflected in lower buying, maintenance, training costs, etc.

¹⁶ Usually, these connections are handled by turbo-prop Bombardiers. Sometimes, a result of a high demand on the given route, or due to necessary change of the airplane's home airport, in connection with other routes, some of the flights are operated by Embraer jets, or even by significantly larger Boeings (see historical data of domestic flights from PLL LOT at <https://www.flightradar24.com> [access 09.10.2018]).

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